A polypeptide [as claimed in] according to claim 2, wherein [the] said signal sequence polypeptide is a member selected from the group consisting of proteinase inhibitor signal sequence I [or] and II.

4. A polypeptide [as claimed in any one of claims] according to claim 1 [to 3], wherein [the] said pest control protein is a member selected from the group consisting of binding proteins, proteinase inhibitors and degradative enzymes.

A polypeptide [as claimed in] according to claim 4, wherein [the] said proteinase inhibitor is a member selected from the group consisting of aprotinin kunitz-type inhibitors, soybean, arrowroot, taro, proteinase inhibitors 1, proteinase inhibitor 2, alpha-1 antitrypsin, bowman-birk inhibitors from soybean and cowpea, and oryzacystatin.

6. A polypeptide [as claimed in] <u>according to claim 4, wherein [the] said</u> binding protein is <u>a member selected from the group consisting of riboflavin, carotenoid, fatty-acid, retinol, alpha-tocopherol, folate, thiamin, pantothenate and biotin-binding proteins.</u>

A polypeptide [as claimed in] according to claim 6, wherein [the] said biotin-binding protein is a member selected from the group consisting of avidin, streptavidin, biotin-binding antibodies and fragments thereof, biotin halocarboxylase synthetase, biotinidase and bacterial proteins.

A polypeptide [as claimed in] according to claim 7, wherein [the] said biotin-binding protein is a member selected from the group consisting of avidin, streptavidin [or] and [a] functionally equivalent variants thereof.

A polypeptide [as claimed in any one of] according to claim[s] 1 [to 8], further comprising at least one additional sequence encoding a protein or peptide.

A polypeptide [as claimed in] <u>according to claim 9</u>, wherein [the] <u>said</u> additional sequence encodes <u>a member selected from the group consisting of a further plant-noxious protein</u>, pest control protein, [or] an antimicrobial <u>protein</u>, <u>an</u> antifungal <u>protein</u>, [or] <u>and an</u> antiviral protein.

11. A polypeptide [as claimed in] according to claim 10, wherein [the] said additional sequence encodes a pest control protein.

/12. A polypeptide [as claimed in] according to claim 11, wherein [the] said pest control protein is a Bacillus thuringiensis (Bt) insecticidal protein.

13. A polypeptide [as claimed in] according to claim 12, wherein [the] said

Bt protein is a Cry protein.

14. A polypeptide [as claimed in] according to claim 13, wherein [the] said pest control protein is a proteinase inhibitor.

A polypeptide [as claimed in] according to claim 14, wherein [the] said proteinase inhibitor is an aprotinin.

16. An isolated nucleic acid molecule encoding a polypeptide [as claimed in any one of] according to claim[s] 1 [to 15].



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- 17. A nucleic acid molecule [as claimed in] according to claim 16, wherein said nucleic acid [which] is a DNA molecule.
- 18. A vector comprising a DNA molecule [as claimed in] according to claim 17.
- 19. A host cell transformed with a vector [as claimed in] according to claim 18.
- 20. A host cell [as claimed in] according to claim 19, wherein said cell [which] is a plant cell.
- 21. A method for producing a polypeptide [as claimed in any one of] according to claim[s] 1 [to 15], comprising the steps of:
- (a) culturing a host cell which has been transformed or transfected with a vector [as claimed in claim 18 to] which expresses the encoded polypeptide; and optionally
  - (b) recovering the expressed polypeptide.
- 22. A method for producing a pest resistant plant, comprising transforming the plant genome to include at least one DNA molecule [as claimed in] according to claim 17.
- 23. A transgenic plant that contains a DNA molecule [as claimed in] according to claim[s] 17.



24. A transgenic plant [as claimed in] according to claim 23, further comprising at least one additional DNA molecule encoding a protein or peptide.

A transgenic plant [as claimed in] according to claim 24, wherein [the] said additional DNA molecule encodes a member selected from the group consisting of a further plant-noxious protein, pest control protein, [or] an antimicrobial protein, an antifungal protein, [or] and an antiviral protein.

26. A transgenic plant [as claimed in] according to claim 25, wherein [the] said additional DNA molecule encodes a pest control protein.

A transgenic plant [as claimed in] according to claim 26, wherein [the] said pest control protein is a Bacillus thuringiensis (Bt) insecticidal protein.

28. A transgenic plant [as claimed in] according to claim 27, wherein [the] said Bt protein is a Cry protein.

29. A transgenic plant [as claimed in] according to claim [28] 26, wherein [the] said pest control protein is a proteinase inhibitor.

30. A transgenic plant [as claimed in] according to claim 29, wherein [the] said proteinase inhibitor is an aprotinin.

31. A transgenic plant expressing pesticidally effective concentrations of a chimeric polypeptide [as claimed in any one of claims] according to claim 1 [to 15].



32. A method for controlling or killing pests comprising administering to said pest an amount of a chimeric polypeptide [as claimed in any one of] according to claim[s] 1 [to 15] which is effective to control or kill said pest.

/33. A method [as claimed in] according to claim 32, wherein [the] said chimeric polypeptide is expressed in a plant.

A method [as claimed in] according to claim 32 [or claim 33], further comprising administering to said pest a pest control protein.

A method [as claimed in] according to claim 34, wherein [the] said pest control protein is a Bt protein.

A method [as claimed in] according to claim 35, wherein [the] said Bt protein is a Cry protein.

A method of controlling or killing pests comprising administering a chimeric polypeptide [as claimed in any one of] according to claim[s] 1 [to 8] which includes a sequence encoding a pest control protein and a second pest control protein, where the combination provides more effective control than administration of the second pest control protein alone.

A method of preventing attack, or controlling or killing pests, on a transgenic plant [as claimed in any one of] according to claim[s] 23 [to 31], comprising treating the plant with a composition comprising a pest control protein.



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A method [as claimed in] according to claim 38, wherein [the] said pest control protein is Bt.
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A method [as claimed in] according to claim 39, wherein [the] said Bt protein is a Cry protein.

A method [as claimed in any one of] according to claim[s] 38 [to 40], wherein [the] said composition is a spray.

42. A method [as claimed in any one of] according to claim[s] 38 [to 40], wherein [the] said composition is a dust.

A method as claimed in any one of according to claim[s] 32 [to 42], wherein [the] said pest is a member selected from the group consisting of:

cotton bollworm (Helicoverpa armigera);

tropical army-worm (Spodoptera litura); [, also]

S. littoralis[,];

S. exigua;

European corn-borer (Ostrinia nubilalis);

tobacco horn worm (Manduca sexta);

loopers (Chrysodiexis spp.);

rice stem borer (Chilo suppressalis);

porina (Wiseana spp.);

cutworms (Agrotis spp.)

diamondback moth (Plutella xylostella);

potato tuber moth (Phthorimaea operculella);

codling moth (Cydia pomonella); Indian meal moth (Plodia interpunctella); gypsy moth (Lymantria dispar); argentine stem weevil (Listronotus bonariensis); clover root weevil (Sitona lepidus); grass-grubs (Costellytra zelandica, Odontria spp.); corn rootworm (Diabrotica virgifera); rice and wheat weevils (Sitophilus spp.); mealworms (Tenebrio molitar); flour beetles (Tribolium confusum); black field cricket (Teleogryllus commodus); locusts (Locusta migratoria); Sawflies (Sirex spp., Nematus olgospilus); Western Flower thrips (Frankliniella occidentalis); Hessian flies (Mayetiola destructor); two-spotted mite (Tetranychus urticae); and European red mite (Panonychus ulmi).

A composition comprising a polypeptide [as claimed in any one of] according to claim[s] 1 [to 15] and a member selected from the group consisting of a carrier, diluent, excipient [or] and an adjuvant.

A composition comprising material derived from a plant [as claimed in any one of] according to claim[s] 23 [to 31] and a member selected from the group consisting of a carrier, diluent, excipient [or] and an adjuvant.

A composition [as claimed in] according to claim 45, wherein [the] said carrier is an agriculturally acceptable carrier.

A7. A composition [as claimed in any one of] according to claim[s] 44 [to 46] which is a pesticidal composition.

A composition [as claimed in any one of] according to claim[s] [48 to 47] 44 which further comprises one or more members selected from the group consisting of antifungal, antiviral, antimicrobial [or] and pest control proteins.

A composition [as claimed in] <u>according to claim 48</u>, wherein [the] <u>said</u> pest control protein is a <u>Bacillus</u> thuringiensis (Bt) insecticidal protein.

A composition [as claimed in] <u>according to claim 49</u>, wherein [the] <u>said</u>
Bt protein is a Cry protein.

A composition [as claimed in] <u>according to claim [50] 48</u>, wherein [the] <u>said pest control protein is a protein as inhibitor.</u>

A composition [as claimed in] according to claim 51, wherein [the] said proteinase inhibitor is an aprotinin.

53. A method for producing a plant-noxious protein, the method comprising extracting the protein from a plant incorporating in its genome a DNA molecule [as claimed in] according to claim 17.